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IN REPLYING, ADDRESS THE

October 25, 1951

Communicable Disease Center
Enteric Bacteriology Laboratories
P. O. Box 185
Chamblee, Georgia

Dr. Joshua Lederberg
Department of Genetics
The University of Wisconsin
Madison 6, Wisconsin

Dear Dr. Lederberg:

We have been much interested in the cultures you recently sent to the laboratory. We found them to be just as you stated. The stock cultures of *S. typhi* and *S. typhimurium* seemed to be typical. Culture #1 is a j phase, as you suspected. It contains Vi components. Culture #2 is IX,XII: i and has the biochemical properties of *S. typhi*. No Vi antigen was detected in the latter culture, although I must admit I am not very adept at the detection of V colonies and some may be present. Mouse passage probably would result in the recovery of Vi colonies.

In retrospect, I am rather disgusted with the advice I gave Dr. O. A. Peso who spent the last year here on a Guggenheim Fellowship. He worked with a number of "transforming principles" but in each instance tried to change organisms of similar flagellar constitution to different O groups (i.e IV,XII: g,m to IX,XII: g,m). Probably had he tried to change H antigens in this way he would have succeeded.

I wonder if there is any connection between the d \rightarrow i change and the VI,VIII: d,i cultures with which we worked some time ago? Probably there is none.

I must congratulate you on your results and will be anxious to know what other changes you produce. Do you consider this gene recombination? From the description of your methods it seemed that it was not.

Please accept my thanks for the book recently received from the University of Wisconsin Press.

Sincerely yours,

Philip R. Edwards, Ph. D.
Bacteriologist-in-Charge
Enteric Bacteriology Unit

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